

# **REDUCING INTERFERENCE BETWEEN DIFFERENT COMMUNICATION SYSTEMS SHARING A COMMON WIRELESS TRANSMISSION MEDIUM**

## **ABSTRACT OF THE DISCLOSURE**

5           In one embodiment, a first wireless communication system conforms to the IEEE 802.15.3  
standard and a second wireless communication system conforms to the IEEE 802.11 standard, where the  
two systems share a common wireless transmission medium. A combined node functions as both an  
IEEE 802.15.3 piconet controller and an IEEE 802.11 access point. The combined node transmits IEEE  
10   802.11 control/management frames to inform other IEEE 802.11 nodes about the beginning and end of  
IEEE 802.11 contention free periods (CFPs), each of which purposely spans an IEEE 802.15.3 CFP and  
the following superframe beacon. As such, IEEE 802.15.3 nodes have unfettered access to the common  
wireless transmission medium during IEEE 802.15.3 CFPs, while allowing access by IEEE 802.11 nodes  
to the medium during IEEE 802.15.3 contention access periods, thereby avoiding destructive interference  
between IEEE 802.15.3 and IEEE 802.11 communications. Other embodiments are not necessarily  
15   limited to these particular wireless LAN standards.